

IN THE SPECIFICATION

Please amend the specification as follows:

On page 15, line ³18, after "oxidizing portion" add -- 22 -- .

IN THE CLAIMS

Please cancel claims 9, 17 and 18-20 without prejudice and amend the claims as follows:

1. (Amended) A method for forming a crystalline silicon nitride layer, comprising

the steps of:

providing a crystalline silicon substrate with an exposed precleaned surface;

removing a native oxide from the exposed surface;

precleaning the exposed surface by employing a hydrogen prebake, a

predetermined amount of time after the removing step; and

exposing the exposed surface to nitrogen to form a crystalline silicon nitride layer.

2. (Amended) The method as recited in claim 1, wherein the step of [precleaning]

removing includes the step of employing a hydrogen fluoride wet clean process to remove native oxide from the exposed surface.

3. (Amended) The method as recited in claim [2] 1, wherein the step of

precleaning the exposed surface by employing a hydrogen prebake is delayed from the step of [employing a hydrogen fluoride wet clean process to remove native oxide from the exposed surface] removing by an interval of between about 30 seconds and about 3600 seconds.

A2
Sub
B2

10. (Amended) A method for forming a node dielectric layer in deep trenches, comprising the steps of:

- providing a crystalline silicon substrate with trenches formed therein, the trenches including exposed silicon surfaces;
- removing a native oxide from the exposed silicon surfaces;
- precleaning the exposed surfaces by employing hydrogen prebake a predetermined amount of time after the removing step;
- exposing the exposed surfaces to ammonia to form a crystalline silicon nitride layer;
- depositing an amorphous silicon nitride layer over the crystalline silicon nitride layer; and
- oxidizing the amorphous silicon nitride layer to form a node dielectric layer.

11. (Amended) The method as recited in claim 10, [further comprising] wherein the step of removing includes employing a hydrogen fluoride clean process to remove native oxide from the exposed surfaces.

12. (Amended) The method as recited in claim [11] 10, wherein the step of precleaning the exposed surfaces by employing a hydrogen prebake is delayed from the step of [employing a hydrogen fluoride clean process to remove native oxide from the exposed surfaces] removing by an interval of between about 30 seconds and about 3600 seconds.

AB Sub 1
21. (New) A method for forming a crystalline silicon nitride layer, comprising the

steps of:

providing a crystalline silicon substrate with an exposed surface;

removing a native oxide from the exposed surface;

precleaning the exposed surface by employing a hydrogen prebake less than about one hour after the removing step; and

exposing the exposed surface to nitrogen having a pressure of less than or equal to about one atmosphere to form a crystalline silicon nitride layer.

22. (New) The method as recited in claim 21, wherein the step of removing includes the step of employing a hydrogen fluoride wet clean process to remove native oxide from the exposed surface.

23. (New) The method as recited in claim 21, wherein the step of precleaning the is delayed from the step of removing by an interval of between about 30 seconds and about one hour.

24. (New) The method as recited in claim 21, wherein the step of precleaning includes the step of prebaking the exposed surface in the presence of hydrogen gas at a temperature between about 400 °C and about 1300 °C.

25. (New) The method as recited in claim 21, wherein the step of precleaning includes the step of prebaking the exposed surface in the presence of hydrogen gas at a pressure between about 10^{-9} Torr and about 600 Torr.

26. (New) The method as recited in claim 21, wherein the nitrogen includes at least one of nitrogen gas, ammonia, atomic nitrogen plasma, an organic nitrogen precursor and an inorganic nitrogen precursor.

27. (New) The method as recited in claim 21, wherein the step of exposing the exposed surface to nitrogen to form a crystalline silicon nitride layer includes the step of introducing ammonia at a temperature of between about 400 °C and about 1300 °C.

28. (New) The method as recited in claim 21, wherein the step of exposing the exposed surface to nitrogen to form a crystalline silicon nitride layer includes the step of introducing ammonia at a pressure of about 5 torr.

REMARKS

This application has been reviewed in light of the Office action dated October 12, 2000. Claims 1-8, 10-16 and 21-28 are now pending in the application. Claims 1-3, 10-12 have been amended, and claims 21-28 have been added. No new matter has been introduced. The Examiners reconsideration of the rejection in view of the following remarks is respectfully requested.